

Application No. 10/813,844

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### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

#### **Listing of Claims**

Claims 1-13 (Cancelled)

Claim 14 (New): A system for skill management of a plurality of knowledge workers in a software industry based on continuous tracking of a plurality of plurality of possessed skills associated with said plurality of knowledge workers and identifying a plurality of plurality of appropriate knowledge workers to meet a plurality of plurality of project requirements, wherein an appropriate knowledge worker of a plurality of appropriate knowledge workers of said plurality of plurality of appropriate knowledge workers is a part of said plurality of knowledge workers, a possessed skill of a plurality of possessed skills of said plurality of plurality of possessed skills is a part of a plurality of skills associated with said system, and said plurality of skills is related with each other through a skill hierarchy, wherein the system is configured to perform the steps of:

(a) evolving a plurality of possessed skills of said plurality of plurality of possessed skills associated with a knowledge worker of said plurality of knowledge workers based on a plurality of contributions in a plurality of projects participated by said knowledge worker;

(b) computing an extent of match between a knowledge worker of said plurality of knowledge workers and a project requirement of a plurality of project requirements of said plurality of plurality of project requirements, wherein said extent of match is an exact match if a required skill of said project requirement and a required period of requirement of said skill based on said project requirement matches exactly with an available skill of said knowledge worker and an available period of said knowledge worker, wherein said exact match is based on said required skill, said available skill, said required period, and said available period, said extent of match is a semi-exact match if said required skill or said required period match only exactly

with said available skill or said available period, wherein said semi-exact match of said required skill and said available skill is based on a path length between said required skill and said available skill based on said skill hierarchy or a degree of overlap between said required period and said available period, and said extent of match is considered an approximate match if said required skill and said required period do not match exactly with said available skill and said available period, wherein said approximate match of said required skill and said available skill is based on a path length between said required skill and said available skill with respect to said skill hierarchy and a degree of overlap between said required period and said available period;

(c) determining a plurality of project specific skills of a plurality of project specific requirements based on a plurality of project requirements of said plurality of plurality of project requirements;

(d) dividing said plurality of project specific skills into a plurality of plurality of non-overlapping skills, wherein a period 1 associated with a skill 1 of a plurality of non-overlapping skills of said plurality of plurality of non-overlapping skills and a period 2 associated with a skill 2 said plurality of non-overlapping skills are such that said period 1 and said period 2 do not overlap;

(e) determining a total number of distinct skills based on said plurality of non-overlapping skills;

(f) obtaining a plurality of multiplicity factors associated with said plurality of non-overlapping skills, wherein said each of said plurality of multiplicity factors denote the number of resources required of a non-overlapping skill of said plurality of non-overlapping skills based on said plurality of project specific requirements;

(g) forming a skill matrix with a plurality of skill matrix elements, wherein said skill matrix comprises a pre-defined number of variations of each of said plurality of non-overlapping skills and is based on said plurality of multiplicity factors with each skill matrix element of said plurality of skill matrix elements being associated with a variation of a non-overlapping skill of said plurality of non-overlapping skills and a particular non-overlapping skill of said plurality of non-overlapping skills, and is a value between 0 and 1, and is based on a path length between said variation of said non-overlapping skill to said particular non-overlapping

skill with respect to said skill hierarchy;

(h) forming a resource matrix with a plurality of resource matrix elements, wherein said resource matrix is based on said plurality of non-overlapping skills and said plurality of multiplicity factors with each element of said plurality of resource matrix elements being associated with a knowledge worker of said plurality of knowledge workers and a non-overlapping skill of said plurality of non-overlapping skills, and is a value between 0 and 1, and indicating the availability of said knowledge worker based on a plurality of possessed skills of said plurality of plurality of possessed skills associated with said knowledge worker and a plurality of project periods associated with said plurality of non-overlapping skills based on said plurality of project specific requirements;

(i) maximizing a summation of product of a resource skill variation assignment and a resource skill variation value using a classical or stochastic approach, wherein said resource skill variation assignment is a part of a plurality of plurality of resource skill variation assignments and is associated with a knowledge worker of said plurality of knowledge workers with a variation of a non-overlapping skill of said plurality of non-overlapping skills with a value of 1 indicating the assignment of said resource and a value of 0 indicating the non-assignment of said resource, said resource skill variation value is a part of a plurality of resource skill variation values of a plurality of plurality of resource skill variation values of said plurality of plurality of plurality of resource skill variation values associated with said knowledge worker, said non-overlapping skill, and said variation of said non-overlapping skill, and is based on said skill matrix, said resource matrix, and said extent of match, the sum of said plurality of plurality of plurality of resource skill variation assignments is said total number of distinct skills, and the sum of said plurality of plurality of plurality of resource skill variation assignments over said plurality of knowledge workers and said plurality of non-overlapping skills is 1; and

(j) forming a plurality of appropriate knowledge workers of said plurality of plurality of appropriate knowledge workers based on said plurality of plurality of resource skill variation assignments and said plurality of project specific requirements.